

Viejo Viejo<sup>1</sup>, Kilby S<sup>2</sup><sup>1</sup>PAREXEL INTERNATIONAL, Uxbridge, UK, <sup>2</sup>Surrey, West Sussex and Hampshire Cancer Network, Guildford, Surrey, UK

**OBJECTIVES:** According to a report from the Rarer Cancers Foundation of England, within the first six months of the launch of the Cancer Drugs Fund in England, only £ 27,437,466 were used while the total amount allocated for the same period was £50,000,000. This means that only a 56% of allocated funds for that period were used. In a health system that restricts access to those oncological treatments that have not shown to be cost-effective or have not been assessed by NICE a more optimal use of the available funds would have been expected. In this study the authors try to explore and determine the possible underlying reasons for the observed underspend of allocated budget within the Cancer Drugs Fund in England from October 2010 to March 2011. **METHODS:** Interviews were conducted across different SHAs (Strategic Health Authorities) in England (n=5) in 2011. A specific questionnaire was designed to conduct this research. **RESULTS:** Majority of respondents mentioned delays in application for drug funding, miscalculation of expected number of application by clinicians, among other reasons for underspend of Cancer Drugs Fund. **CONCLUSIONS:** SHAs should make sure that funds are properly allocated and used in the benefit of patients and no application should be rejected in the basis of an economic reason but just on pure clinical reasons

## PCN173

## CANCER INCIDENCE EVALUATION AND PATHWAY IDENTIFICATION FOR TREATMENT COURSE DETECTION USING BILLING DATA FOR AUSTRIA

Zauner G<sup>1</sup>, Einzinger P<sup>2</sup>, Endel C<sup>3</sup>, Breitenecker F<sup>4</sup><sup>1</sup>Dwh Simulation Services, Vienna, Austria, <sup>2</sup>Dwh Simulation Services, Vienna, Austria,<sup>3</sup>Main Association of Austrian Social Security Institutions, Wien, Wien, Austria, <sup>4</sup>Vienna University of Technology, Vienna, Austria

**OBJECTIVES:** Analyzing the cancer incidence and TNM – classification is done by national statistic in high spatial resolution, but no detailed data regarding pre-existing illnesses and treatment pathways are gathered. That is why these problems are focused on using billing data from extramural and intramural anonymised patients datasets extended by drug prescription information. **METHODS:** Starting with anonymized single person spatio-temporal hospital data including diagnoses coded by ICD10, medical attendance data and patient identity key a pre-selection is realized. In the next step the intramural patient history is focused on, detecting the first indicated hospitalization. Afterwards criteria for the number of reuptakes as well as for exclusion of cases (filtering not new diseases) are defined based on the intramural patient history. Analyzing cancer indicated drug administration and drug prescription the year before the first hospitalization, knowledge about risk groups is collected and evaluated. Additionally the probability of surviving regarding different treatment courses is measurable. These calculations are done exemplary. **RESULTS:** Comparing the incidences calculated out of casemix datasets for liver cancer, lung cancer and mamma carcinoma high accordance comparing to cancer registry of Austria is observed. In case of liver cancer the overall deviation is 14 cases per year; equal to a difference of 1.5 percent. In case of mamma carcinoma 4882 detected new infections in control year 2007 are faced with 4833 new cancer diseases registered by national statistics. **CONCLUSIONS:** Using detailed single person spatio-longitudinal billing datasets in combination with extended search strategies using exclusion criteria based on expert knowledge as well as data structure information and modeling skills, highly reliable datasets are edited. The analyzed background knowledge can be used in modern dynamical simulation models producing reliable results.

## PCN174

## VARIATIONS IN DRUG ADMINISTRATION COSTS FOR STAGE III/IV NSCLC IN EUROPE

Rosery H<sup>1</sup>, Zerwes U<sup>2</sup>, Walzer S<sup>3</sup><sup>1</sup>Aim GmbH - Assessment in Medicine, Research and Consulting, Loerrach, Germany, <sup>2</sup>Aim GmbH, Assessment-in-Medicine - Research and Consulting, Loerrach, Germany, <sup>3</sup>F. Hoffmann-La Roche Pharmaceuticals AG, Basel, Switzerland

**OBJECTIVES:** European payer authorities reimburse the administration of anticancer agents for mNSCLC patients according to diverging tariffs and varying codes. This poses the question of whether there is the need for a sensitivity analysis of administration costs in health economic models when applied in France, Germany, Italy, Spain, and the UK. **METHODS:** Two systematic literature reviews of the bibliographic database Medline were performed in order to identify relevant publications (of year 2000+) on administration costs of chemotherapy for the treatment of NSCLC. The review was supplemented by a search in the databases of the Cochrane Library, EMA-EPAR, and ClinicalTrials.GOV. In addition, treatment guidelines, reimbursement databases, and national reimbursement tariffs were hand-searched. Semi-structured interviews with expert oncologists were completed. Data extraction and evidence synthesis from these sources formed the basis of this evaluation. **RESULTS:** Twenty-three manuscripts, 108 phase III study protocols, 6 EMA-labels, and 12 European treatment guidelines were included in the analysis. The ten NSCLC antineoplastic drugs mentioned in the ESMO and NCCN guidelines cover a wide set of administration patterns with respect to 1st or 2nd line monotherapy, combination therapy, and mono-or combination-maintenance therapy. The treatment schedules vary in dose per application, composition per cycle, and number of cycles. The main tariff for France is GHS 9606/GHM 28Z07Z (€386), for Germany daycase DRG 71B (€720) and several separate agreements ("Onkologievereinbarung") and for the UK daycase HRG SB97Z+SB13Z (€399). For Italy and Spain the actual DRG values vary tremendously, for instance in Italy for DRG410 (€310 for Emilia Romagna vs. €40 for Basilicata), and in Spain C.6 for Galicia (€170) or 1.7.2.2 for Asturias (€149). **CONCLUSIONS:** The difference in treatment schedules in combination with the variation in national administration tariffs shows the importance

of a sensitivity analysis when conducting a health economic analysis of NSCLC administration costs in Europe.

## PCN175

## REIMBURSEMENT OF ANTICANCER DRUGS IN CANADA: WHAT CAN WE LEARN FROM THE NICE NEW APPRAISAL PROCESS FOR LIFE-EXTENDING END-OF-LIFE TREATMENTS?

Cooper D<sup>1</sup>, Tarride JE<sup>2</sup>, Goeree R<sup>2</sup><sup>1</sup>Institut National d'Excellence en Sante et en Services Sociaux (INESSS), Quebec, QC, Canada,<sup>2</sup>McMaster University, Hamilton, ON, Canada

**OBJECTIVES:** In January 2009, the National Institute for Health and Clinical Excellence (NICE) adopted an evaluation process for life-extending end-of-life treatments. For eligible drugs, QALYs are weighted to favour the incremental cost-utility ratios (ICUR). Also, patient access scheme (PAS, pricing agreements) are sometimes established between the NHS and drug manufacturers to lower the economic impact of costly drugs. The purpose of this study was to document the effects of the end-of-life evaluation process (EOL) on anticancer drugs listing recommendations. **METHODS:** NICE website was searched to identify published technology appraisal guidances of anticancer drugs issued between January 2009 and May 2011. We documented EOL and PAS status, the listing recommendation and the supporting ICURs. Positive and negative recommendations were stratified by EOL and PAS status. **RESULTS:** We retrieved 32 recommendations among which 50% were approvals. The proportion of accepted drugs tends to be higher among those evaluated with the EOL (9/16; 56%, p=0.8). The ICURs of positive recommendations associated with drugs not eligible or not considered for the EOL were mostly comprised between 20,000€/QALY and 30,000€/QALY gained. On the other hand, ratios of positive recommendations for drugs eligible to the EOL were higher and varied from 30,350€/QALY to 54,366€/QALY gained. Among drugs evaluated with the EOL, the proportion of accepted drugs analysed with PAS (6/9; 67%, p=0.51) tends to be higher than for drugs accepted without PAS. **CONCLUSIONS:** Despite the small number of evaluations since its implementation, we observed with the EOL a higher ICUR threshold that may have led NICE to recommend to list more anticancer drugs that it would have been without the EOL. When the EOL was considered, PAS also seems to have contributed to a higher rate of positive listing. These findings have raised questions about the economic evaluation of anticancer drugs in Canada.

## PCN176

## CANCER DRUG PRICES IN THE UNITED STATES AND THE UNITED KINGDOM: IMPLICATIONS FOR PRICING STRATEGY AND DRUG ACCESS

Aggarwal S

Novel Health Strategies, Bethesda, MD, USA

**OBJECTIVES:** To understand relative price differential for cancer drugs in the US and the UK. Develop implications for pricing strategy and patient access for cancer drugs. **METHODS:** Ten branded cancer drugs were selected and their prices for similar dose and packaging were compared in the US and the UK. Prices were analyzed for the end of 2010 and early 2011. Historical exchange rates were used to convert British pounds to US dollars. Relative price discount was calculated for all selected cancer drugs. KOLs and payers were interviewed to understand current and future implications of this price differential. **RESULTS:** The median price discount for selected ten branded cancer drugs in the UK versus the US was ~50%. The range of discount for 10 branded cancer drugs was 27%-61%. The price discount for oral small molecule drugs was higher than for biologics (55% versus 45%). Since UK is one of the few remaining free pricing markets in Europe, other European markets are likely to have even higher discounts relative to the prices in the United States. Due to rising coinsurance of speciality products, US cancer patients bear significantly higher cost than patients in the UK. KOL and payer interviews suggest US pricing trends for cancer drugs are unlikely to be sustained at this level in the future. **CONCLUSIONS:** US cancer drug prices are significantly higher than the prices in the UK. This price differential is unlikely to be sustained in the future.

## PCN177

## ASSESSMENT OF REIMBURSEMENT PROCESSES AND OUTCOMES FOR CANCER DRUGS IN CROATIA – COMPARISON TO NICE AND NCCN GUIDELINES

Vitezic D<sup>1</sup>, Vrdoljak E<sup>2</sup>, Bolanca S<sup>3</sup><sup>1</sup>University of Rijeka Medical School and University Hospital Centre Rijeka, Rijeka, Croatia,<sup>2</sup>University Hospital Center Split, Split, Croatia, <sup>3</sup>CARPC (Croatian Association of Research Based Pharmaceutical Companies), Zagreb, Croatia

**OBJECTIVES:** Objective of this study was to assess reimbursement outcomes and patient access to oncology drugs in Croatia. National Institute of Clinical Excellence (NICE) cancer guidelines and National Comprehensive Cancer Network (NCCN) guidelines were used as benchmark. NICE is known for being committed to complying with legal obligations on equity and human rights, conducting their work based on identified cost effectiveness thresholds and known to be restrictive in their recommendations. On the other hand, NCCN professional guidelines are key international guidelines for oncology professionals which have been accepted and followed worldwide. **METHODS:** Reimbursement processes, specific indications and restrictions for 23 studied cancer drugs, ATC L01 class (antineoplastic agents) have been analyzed and compared to UK NHS funding and reimbursement recommendations given through NICE cancer guidelines as well as recommendations given through NCCN guidelines. **RESULTS:** Studied cancer drugs were used for the treatment of 14 different tumor locations: breast, colon, lung, leukemia, renal, GIST, ovary, lymphoma, glioblastoma, prostate, liver, gastric, myeloma. Among 57 registered indications, Croatian Health Insurance Fund has in total reimbursed 43 (75%) while NICE has issued positive recommendations for only 35 (60%). On the other hand, all investigated drugs and relevant indications except of one partially